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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,799	09/16/2005	Hitoshi Kotajima	107348-00474	6294
4372	7590	09/13/2007		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER DESAI, NAISHADH N	
			ART UNIT 2834	PAPER NUMBER
			NOTIFICATION DATE 09/13/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/528,799	KOTAJIMA, HITOSHI	
	Examiner	Art Unit	
	Naishadh N. Desai	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/23/2005, 11/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 3/23/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakinuma et al (US 6091172) in view of Kikuchi et al(US 6030260).

2. As per independent claim 1:

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An outer rotor type multi-pole generator stator in which a plurality of coils (28U, 28V, 28W, 29, 30) are wound via a bobbin (24, 24') around a large number of projecting poles (23) provided on the outer periphery of a stator core (22), and [see abstract lines 1-4 of Kakinuma et al]

a plurality of connecting terminals (32, 34, 36, 39) [abstract lines 4-5 of Kakinuma et al] made of a conductive metal [Col 1 lines 14-15 of Kakinuma et al] are fitted into and fixed to a plurality of fitting holes (31) provided in the bobbin (24, 24') inwardly of the coils (28U, 28V, 28W, 29, 30) with respect to the radial direction of the stator core (22) [abstract lines 5-6 of Kakinuma et al], each connecting terminal (32, 34, 36, 39) having one end thereof connected to an external conductor (46) and having the other end thereof connected by fusing to a lead wire (33, 35, 37, 38, 40, 41) extending from the coil (28U, 28V, 28W, 29, 30) [abstract lines 11-17 and Fig 8B of Kakinuma et al], characterized in that each of the connecting terminals (32, 34, 36, 39) is formed from an external conductor connection terminal portion (32a, 34a) [Fig 8B of Kakinuma et al] that is fitted into and fixed to the fitting hole (31) so that one end thereof connected to the external conductor (46) projects from the fitting hole (31) [Fig 9 of Kakinuma et al], a flat connecting plate portion (32b, 34b) [Col 1 lines 55-57 of Kakinuma et al] having one end thereof connected at right angles to the other end of the external conductor connection terminal portion (32a, 34a) and extending toward the radially inner side of the stator (8) [Fig 8A and B of Kakinuma et al],

and

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a clamping plate portion (32c, 34c) provided so as to be connected to the connecting plate portion (32b, 34b) so that the lead wire (33, 35, 37, 38, 40, 41) can be held between the clamping plate portion (32c, 34c) and the other end portion of the connecting plate portion (32b, 34b) and connected by fusing [Fig 8A-D, Col 1 line 60 of Kakinuma et al], and

the bobbin (24, 24') is provided with a channel (43) or a through hole (48) [Fig 4 of Kikuchi et al shows the bobbin to have two holes wherein one can be used for the electrode] having one end thereof facing said other end of the connecting plate portion (32b, 34b) [Fig 3 and Col 3 lines 59-62 of Kakinuma et al] and opposite ends thereof open so that one electrode of pair of electrodes (44, 45; 44', 45') for connecting by fusing can be inserted through the channel (43) or through hole (48) [Fig 3 and Fig 8A-D of Kakinuma et al].

Kakinuma et al disclose the device per claim one above. Kakinuma et al do not disclose the bobbin to have two holes of channels wherein one of the channels may be used to insert an electrode. Kikuchi et al teaches a bobbin having two holes wherein one can be used to insert an electrode to fuse the connecting terminal. It would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the device of Kakinuma et al to have a bobbin with two channels and to use one of the channels to insert an electrode to fuse the connecting terminals. The motivation to do so would be that it would eliminate the need to peel off the insulating skin of the magnet wire [Col 1 lines 23-35 of Kikuchi et al] and allow for the number of steps of the

connecting operation to be reduced and for an easier operation of connecting the coil to the connecting terminal [Col 1 lines 36-40 of Kikuchi et al].

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakinuma et al and Kikuchi et al as applied to claim 1 above, and further in view of Baker-Bachman et al (US 2004/0061390).

3. As per dependent claim 2:

Kakinuma et al and Kikuchi et al teaches the device as applied to claim 1 above.

Kakinuma et al and Kikuchi et al do not teach the connecting terminals to be in a trapezoidal shape towards the radially inner side of the stator. Baker-Bachman et al in paragraph 0022 clearly discloses the use of many shapes for terminals including a trapezoidal or polygonal shape.

It would have been obvious at the time the invention was made to a person having ordinary skills in the art to modify the device of claim 1 above with the terminals of Baker-Bachman et al to have a trapezoidal shape wherein the width is decreasing towards the radially inner side of the stator. The motivation to do so would be that it would allow for easier assembly and manufacturing of the motor.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakinuma et al and Kikuchi et al, in view of Baker-Bachman et al (US 2004/0061390) and further in view of Beakes et al (US 5755021) as applied to claims 1 and 2 above.

4. As per dependent claim 3:

Kakinuma et al, Kikuchi et al and Beakes et al teaches the device and steps of making the motor as applied to claims 1 and 2 above. Kakinuma et al, Kikuchi et al and Beakes et al do not explicitly teach to cut off an unwanted portion of the lead wire projecting from the terminal. Beakes et al discloses the method of cutting off unwanted portions of the lead wire [Col 4 lines 40-45].

It would have been obvious to a person having ordinary skills in the art at the time the invention was made to cut off the unwanted portions of the lead wire. The motivation to do so would be that it would allow for more uniform packaging of the motor parts and reduce material and its cost.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takeshi et al teaches a method of connecting motor lead wires, connection structure, and motor. Suzuki et al teaches a terminal structure of a motor. Kakinuma et al teaches a coil connecting structure in outer rotor-type multi-pole generator. Futami et al teaches a stator winding connection arrangement for electric motor. Terakado et al teaches a connection structure of a wire bundling terminal and coil leading-out wires, and small size motor and alternator for a vehicle using the connection structure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naishadh N. Desai whose telephone number is (571) 270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Naishadh N Desai
Patent Examiner


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800